OTTAWA HOME COMPUTING

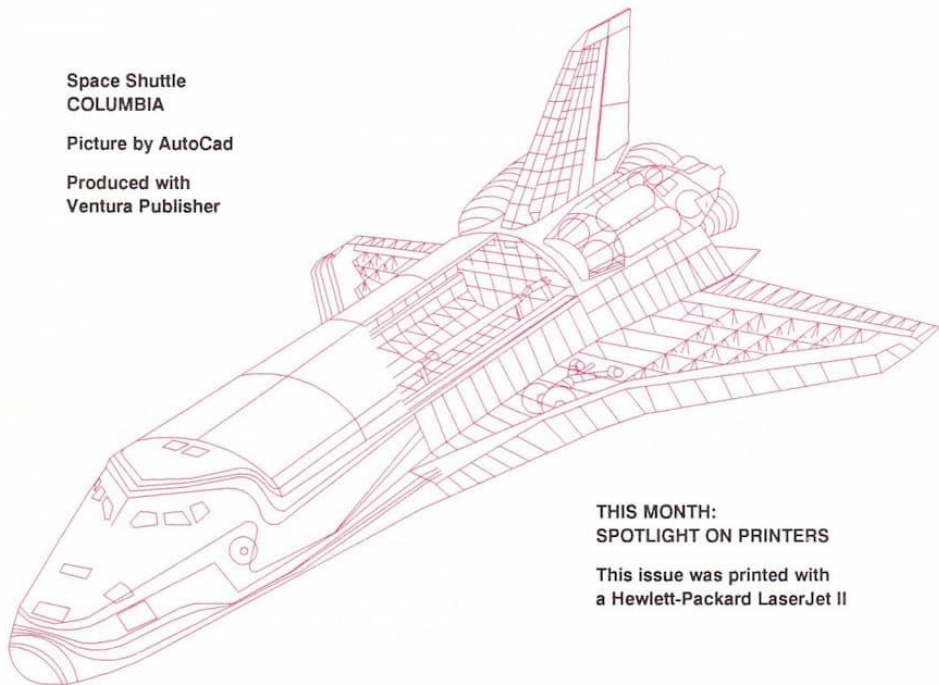## The Newsletter of the Ottawa Home Computing Club

Space Shuttle
COLUMBIA

Picture by AutoCad

Produced with
Ventura Publisher

THIS MONTH:
SPOTLIGHT ON PRINTERS

This issue was printed with
a Hewlett-Packard LaserJet II

IN THIS ISSUE...

OTTAWA HOME COMPUTING CLUB

MEMBERSHIP

Membership in the Ottawa Home Computing Club is open to all who have a genuine interest in home computing. The membership fee is $20.00 per year and entitles members to:

- attend monthly meetings
- buy Club disks
- receive the Club newsletter
- participate in the election of the Club executive
- participate in any other Club-sponsored activities.
- extended sign-on time on the Club BBS

MEETINGS

Club meetings are held monthly at the Charlebois High School (Alta Vista at Heron), usually the third Monday of the month. Meetings for the next school year are as follows:

May 17*, June 14*, July 19*, August 15

An * beside a date indicates that the meeting is not on the third Monday of that month. Due to conflicts with holidays and school programmes, we have had to take the second and third Tuesdays in May, June and July.

Meeting format is standard (see "Club Notes" for specific details on the upcoming meeting) and the format is:

- 7:30 Membership registration, Disk of the Month sales, socialization
- 8:00 Business Meeting
- 8:20 Main Presentation
- 9:00 Special Interest Group (SIG) meetings, Librarian and Machine-specific group meetings

Special Interest Groups are meeting places for people with similar interests. Tell people what you're doing, or would like to be doing; ask people what they're doing, or discuss a problem you're having. What members get out of these meetings is proportional to what they put in.

Also in this time period the Following Librarians will be available for your questions, suggestions, disk orders, etc. You may even catch a demo of the latest software:

- Apple & Macintosh, Room 227
- Commodore & C64 Disk of the Month, Room 219
- Amiga, Room 208
- C128 & CP/M, Room 210
- MS-DOS, TBA

TV SHOW: "The Whole Bit"

The Ottawa Home Computing Club, in co-operation with the other computer clubs in the area and with Skyline Cablevision, produces an informative one-hour TV program. This program is aired live on the first Tuesday of every month at 10:00 pm on cable channel 22 (for both Ottawa and Skyline subscribers) and repeated during the week. Contact your cable company for more details.

CLUB EXECUTIVE

Elected Positions:

- President, Pierre Castricum, 521-6840
- Vice-President, Scotty Adams, 592-3492
- Secretary Serge Comet, 729-2142
- Treasurer, Mike Bryan, 226-5588
- Program Co-ordinator, Wayne D. Schaler, 728-7811

LIBRARIANS:

- Amiga, Don White, 829-2082
- Apple, Vojta Frysek, 722-9778
- Commodore 64, Carl Bigras, 776-1402
- Commodore 128/CP/M, Ed Steenhorst, 820-5389
- MS-DOS, Peter Nickless, 837-3402
- TPUG, Marv Bero, 225-8551

Other Positions:

- Membership, Ray Monette, 722-1204 Lucien St. Denis 224-2972
- Bulletin Board SYSOP, Don White, 829-2082
- Retail Disk Distribution, Peter Martin, 731-7700
- Newsletter Editor, Bob Mason, 837-3197

OHCC BULLETIN BOARD: 828-6440

Address all correspondence to:

Ottawa Home Computing Club
P.O. Box 4164, Station "C"
Ottawa, Ontario K1Y 4P3

OTTAWA HOME COMPUTING

Ottawa Home Computing is the newsletter of the Ottawa Home Computing Club, and is mailed free-of-charge to all members in good standing. Ottawa Home Computing is published 10 times a year, monthly except for the months of June and August.

Submissions to Ottawa Home Computing are most welcomed. If hand written, please make sure your submission is legible. Articles submitted in a ready-to-print format, or on disk, are also appreciated. Please contact the Editor for more information if you chose either of these latter two methods.

Graphic submissions are also needed. For best reproduction, submissions should be designed to the width of one or two columns (approximately 3 1/2" or 7"). If produced on a printer, please use a fairly new ribbon: if drawn please use a black pen.

Classified advertisements of personal items (up to 25 words) are free to members.

Commercial display and classified advertising possibilities are described in a brochure made available to potential advertisers. Please contact the Editor if you would like to receive this brochure.

Address all correspondence to:

Bob Mason
29 Valewood Cres.
Ottawa, Ontario K1B 4G1

CLUB NOTES

by Bob Mason

UPCOMING MEETINGS

PLEASE NOTE THAT THE NEXT THREE GENERAL MEETINGS WILL BE ON A TUESDAY, STARTING WITH THE MEETING TUESDAY, MAY 17.

May 17 (Tuesday)

See page 3 for general meeting structure.

If you're looking for a printer, or thinking of upgrading, don't miss this meeting. Darrell Guard of G-Plus Computers will have printers from QMS, Roland, Fortis and Star, including laser, 9- and 24-pin dot matrix, and ranging in price from $150 to $8,300. To drive this impressive collection, he'll be using an Amiga 500 running PAGE SETTER or equivalent, and a AST Turbo 286 running VENTURA.

Not only will this be an interesting display of Desk Top Publishing, but it will put a variety of printers through their paces, clearly showing many of the different capabilities of each, and maybe help you decide whether the extra money you have to spend on a better grade of printer is really worth it.

NOTES FROM THE APRIL EXECUTIVE AND GENERAL MEETINGS

The Executive meeting was held April 11. Pierre Castricum and Peter Martin have spent a lot of time making arrangements with the Ottawa Geneological Society regarding our participation in their upcoming conference Seminar '88 at U. of O. As it now stands, the computer display will be in the "Music Listening Room" at the Unicentre, and we have people bringing a C64, Amiga, Mac and MS-DOS laptop. It wouldn't hurt to have backup people (in case someone can't make it) and people to fill in for a couple of hours here and there. If you're interested in helping out in any way, give Pierre Castricum a call.

Other business involved the discussion of ideas for upcoming programmes, nominations for the executive, problems with the newsletter (quality and delivery time), and a possible membership drive.

The C64 librarian, Carl Bigras, indicated that the hardware demo he had done in room 219 in March was such a success that he was hoping to do a demo every month. This month he'll be doing the 1581 disk drive.

The club needs a C128 librarian. If you have any inkling that you might like to do this, contact Pierre C. We'll give you lots of help. 2 former C128 librarians are still active in the club, and will be able to give you whatever help you might need to get started.

GENERAL MEETING

The main speaker was George Fisk, a lawyer who specializes in computers and copyright law. Though the new copyright law has not been passed, it is in the senate now and it's unlikely that there will be any changes to the section applying to computer software and hardware.

George said that the proposed law will allow you to make one copy of any piece of software you own -- the copyright terms with a specific piece of software may permit more than one copy for that piece. But the law also say that if you sell the original, you must get rid of the copy at the same time. The law also permits the lending of an original, but not of lending a copy.

Mr. Fisk said that, as he understands it, possessing an illegal copy would lead to confiscation, unless it could be proven that you made that copy, in which case you could be subject to fines up to $25,000 or 6 months in jail. It appears that the law is aimed at people who make a living copying disks and selling those copies.

George also talked about chips and copyright; this portion of the law is designed to give some protection to the makers of computer hardware, and to allow prosecution of the "cloners".

A short question period and a well-intended informal discussion afterwards indicated a high level of interest in this new law, and legal matters as they pertain to the computer.

NEWSLETTER PRODUCTION

This months newsletter — including the cover, but excluding the ads and cartoons — was printed on a Hewlett-Packard LaserJet II printer. Page design and layout was by Peter Nickless, using Ventura Desktop Publisher.
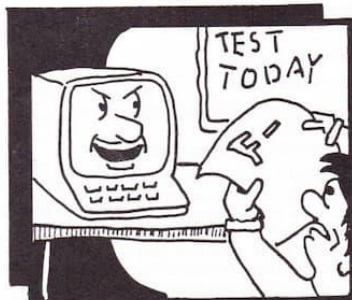
FOR A SMALL FEE, I COULD GIVE YOU A+.

President's Message

by Pierre Castricum

It seems like only yesterday that we were all toasting the new year. It's May already and nearly half of the year has gone by.

New Club Secretary found!

I would like to take this opportunity in welcoming Gerry Bouchard to the post of secretary. I am quite pleased that he has accepted the nomination and look forward to working with him in the next year.

April Wrap-up

At the last meeting, it was noted that TPUG (Toronto Pet User Group) had formalized an agreement with the publishers of INFO magazine; this agreement dealt with the publication of INFO magazine which contains TPUG's newsletter as an insert. Being a TPUG member myself, I began receiving a copy of INFO together with the newsletter insert. If you already subscribe to INFO and are a member of TPUG, you are asked to send the mailing label from the magazine to TPUG as soon as possible; otherwise you will receive two copies of INFO.

I hope everyone enjoyed the excellent program at last month's meeting, presented by Mr. George Fisk of the firm Gowling and Henderson. Mr. Fisk clarified some of the major provisions of the new legislation which was recently passed by parliament in order to reduce incidents of copyright infringement.

I hope to see all of you at the meeting; until then, Happy Computing!

Beginner's Corner for C64 Users
By Pierre Castricum

I was supposed to write an article this month regarding spreadsheets, word processors and databases.

The article will not appear this month as I just haven't had the time to complete it. This was due to an urgent family matter which has taken up most, if not all my spare time since late April. I hope to have it ready for next month's newsletter.

Thank you for your continued support.

C-64/C-128 DISK OF THE MONTH RETAIL SALES

The C-64 and C-128 Disk of the Month is carried at the stores listed below. It sells for about $4.50 and is available two days after each meeting. *NOTE: a new C-128 disk may not be available every month.*

- **ALI COMPUTERS**, 1158 Ogilvie Road, 744-0220

- **BOOK HEAVEN**, 2297 St. Joseph (Orleans), 830-3365

- **COMPUCENTRE**, Carlingwood Mall, 729-0448
  Rideau Centre, 230-3672

- **G-PLUS**, 130 Albert Street, 230-7960
  1400 Clyde, 723-2201

- **MR DISKETTE**, 119 O'Connor Street, 232-5203
  1600 Merivale Rd., 727-0179

- **TGF COMPUTERS**, 2430 Bank Street, 738-7471

C-64 Librarian's Comments

by Carl Bigras

Last month I just couldn't find enough time to write some comments on this file due to some complication putting this disk together.

A couple of months ago, I asked that if anyone had anything to sell, pass a message to me and I'd put it up here and maybe on the newsletter. Well it worked great, and I've listed those messages on the disk of the month, and they were in the newsletter as well. I'll keep doing this as long as people keep giving me the information.

Is anyone interested in having the club write a letter to Berkeley Softworks (GEOS)? If so, let me know what problems you are having with GEOS (in writing, please) and be specific;

- Which version?
- What program? & Version?
- What is the problem? & when?
- What is the ERROR message?

Maybe together we can get something done

SUMMER SCHEDULE

Summertime, and the living is easy ... at least for the newsletter staff. Club members are reminded that there will be no newsletter published in June or August. Details of the June meeting have not been finalized, but the main presentation will be by Lynx Technical Services. Watch the classified ads in *The Citizen* for more information.

Membership Report May 1988

Renewal Time

If your name appears on this list, please check with Raymond Monette or Lucien St. Denis, our membership chairmen. A one-month grace period will be allowed, then your name will automatically be removed from the membership list.

DATE.....NAME	DATE ....NAME
05/88/01 ..Hoy Doug	05/88/02 ..Howard Dan
05/88/04 ..Cox J.W.	
06/88/01 ..Watson Melvin	06/88/02 ..Jenkins Robert W.
06/88/03 ..Gendron Thomas	06/88/04 ..Lalonde Brian
06/88/05 ..Champagne Bob	06/88/06 ..Poole Charles
06/88/07 ..Miller Fred	06/88/08 ..Chafe Herbert
06/88/09 ..Cooper Donald	06/88/10 ..Haley Arthur H.
06/88/11 ..Swarts Norman	06/88/13 ..Baird Helenia J.
06/88/14 ..Bond John B.	06/88/15 ..Watter Josephy
06/88/16 ..Schowalter Bruce	06/88/17 ..Van Boschoten P.

Welcome New Members

(N = New; R = Renewal)

05/01.... Greenstreet J. (r)	05/02 ....Brown Vicky (n)
05/03.... Baker Keith R. (n)	05/04 ....Doyle Wilf (r)
05/05.... Watson D.A. (n)	05/06 ....Dumont Charles (r)
05/07.... Papillon Robert (r)	05/08 ....Gamble Tom (n)
05/09.... Guibord Paul (r)	05/10 ....Beaucaire Vic (r)
05/11.... Gunn Ross D. (r)	05/12 ....Henein J.-C. (n)
05/13.... Harter Henry (n)	05/14 ....Taylor Edward (r)

Viruses, Worms, Trojans ... and Nerds

by Jim Butterfield

The Amiga world has started to notice a new phenomenon: the "virus". Developed in Switzerland and intended as a harmless prank, this little critter is becoming widespread. it can damage commercial programs. It can cause the Amiga to crash ("meet the Guru") without warning. And worst of all: its existence will encourage other computer nerds to write vandalism programs.

Traditional Commodore computer owners have been moderately safe. Their logic is in ROM, safe from tampering. It's hard for them to visualize what can happen in "soft logic" machines, where almost everything is on disk and can be corrupted.

Cookie Monster?

Many years ago, I thought of writing an article about the "Cookie Monster". This was an elusive program said to have appeared on a large multi-user system. On occasion, a user running some normal program would be interrupted and asked, "COOKIE?". Any reply would cause the regular program to resume, while the Cookie Monster task would hide itself away within the system, to reappear to some other user at some future time.

I had planned to write this article as an "April Fool" item. That sort of thing couldn't happen on the Commodore eight-bitters. The important part of the logic was in ROM, within the computer or disk drive. I decided to drop the idea, however, because other small computers - such as Apple and Atari - used "soft logic" DOS systems. They could be corrupted...and I didn't want to put the idea into anyone's head.

Computer Nerds!

The problem is that there are always computer nerds waiting in the background. To them, nothing is more fun than a program to harm other people's computer systems. Even in the Commodore world, you may have met such crazies. There have been programs uploaded to bulletin boards which display graphics, play a tune...and then announce, "HA HA - I HAVE JUST REFORMATTED YOUR DISK!".

Some harmful programs come about through lack of judgement. This happened to a popular archiving (used for uploading and downloading) offered as shareware. The author discovered that his name was being removed from the program before it was uploaded to bulletin boards. So he devised a "checksum" feature which, if it discovered that the program had been changed, would format the disk in the drive, wiping out its contents. Sadly, the victims were not the nerds who removed or changed the author's name. Instead, the innocent users who downloaded this program, expecting to find it useful, found instead that their data disks were destroyed.

There have been a variety of names given to programs which appear useful but which in fact cause damage. They used to be called "worms", since they were working out of sight. The term WORM is now more commonly used for a new type of storage technology: Write Once, Read Many.

The expression "Trojan Horse" is a fine literary reference. Such a program, like the original Trojan Horse, looks attractive but brings bad trouble if you take it. These programs are a serious problem on IBM disk systems, where they are often called just "Trojans". PC/DOS allows "invisible" directory entries, and many users can be unaware that they have trouble waiting. One such Trojan is rumoured to be waiting until Friday, May 13, 1988, at which time it will cause the system to fail with loss of all data.

> ## "There's a reward system being set up to track down and prosecute anyone creating a virus"

The term "virus" is fairly new, but quite apt. Like a real virus, it spreads itself from disk to disk until most of a users library is "infected". And the Amiga SCA virus is "highly contagious", partly because it has an "incubation period" during which time you don't know you've caught it. One of the methods of battling it is "quarantine"... identifying who's got it and stopping its further spread.

Swiss Cracker's Association

The Amiga virus was originated by SCA, the Swiss Cracker's Association. It was meant to be harmless, but SCA missed a couple of points. The first danger is that commercial software can be rendered useless by the virus, which occupies the same area of disk as do many protection schemes. The second danger is that SCA believed that they were inserting the virus into the memory "stack", where it would cause no harm; but that is not the case for all RAM configurations.

But the biggest danger is that the virus has now come to the attention of the nerds. There are already known to be two new viruses (virii?) in existence, and there will surely will be more. And some of them may be VERY harmful to the health of your computer.

You and Your Disk Drive

by Bob Mason

Cleaning Your Disk Drive

Disclaimer: While due care has been taken to present complete and accurate information, neither the *Ottawa Home Computing Club* nor the author can be responsible for problems which may occur as a result of a reader following the instructions of this article. **Note:** opening up equipment normally voids any warranties which may be in effect.

All disk drives require maintenance. This article was written after doing a Commodore 1571 drive, but the same principals apply to all. The Commodore manual recommends that once a year you should clean the read/write head(s), lubricate the rails and dust off the write-protect sensor. That is probably a good schedule for all disk drives.

The first thing that should be stressed is that there is absolutely no point in cleaning the drive if you are going to introduce other foreign matter into the system. No stogies hanging from the lip; no cats prowling in the work area; if you're losing your hair as quickly as I am, wear a hairnet. Seriously, **use the proper cleaning materials in a clean environment**.

Dirty heads can be caused by a number of things:

- The surface of the disk becomes worn to the point where particles rub off onto the head. This is more likely if you have a few disks that you use a lot.

- The diskette has a liner designed to trap foreign material. But the trapped dirt can become dislodged and rub off on the head. This is especially true if you flip the disk over, so that the disk is spinning the other way.

- Dirt can be picked up on the disk if it's not always stored in its envelope. Don't forget, in a single-head drive like the 1541, it's the **bottom** surface that comes in contact with the head — that's right, the side laying on the "clean" desk.

- Dirt and dust can get in the envelope if the envelope is not stored in a closed case. Dirt and dust can also get into the drive itself. If your drive, or fan, has a filter, keep it clean, and try to keep the room clean.

Head Cleaning Methods

There are two general methods of cleaning the heads. The first, and easiest, involves buying a head cleaning kit consisting of a disk and a bottle of fluid. If you have a single-head drive, make sure the kit you buy has a provision for cleaning one head only. Some disks have a removable panel on the second side for two-head cleaning; some are inserted one way for single, another way for 2-head cleaning; some are only set up for 2-head cleaning, and those are the ones to avoid if you have a 1541.

The disk consists of a cloth material; the cleaning fluid is 90% isopropyl alcohol. Spread 8-10 drops evenly over the cloth surface of the disk, turn on the computer and drive, insert the disk in the drive and issue a load command (load directory or a file). The disk will spin, cleaning the heads. It's fast and easy, and you don't have to take the drive apart. On the negative side, you can't see whether the head is clean, you cannot put additional pressure on the scrubbing surface, and it's expensive if you only use it once. If you reuse it, then you're cleaning it with a dirty cloth — granted only slightly dirty.

The second method involves purchasing the cleaning fluid and using a lint-free cloth wrapped around a tongue depressor (anything thin and flat and with a bit of give to it) or a head cleaning tool consisting of a piece of sponge on a plastic or wooden stick. Radio Shack sells the fluid and a package of the rods for a few dollars.

> "...it's the bottom surface that comes into contact with the head — that's right, the side laying on the 'clean' desk."

Remove the cover on the drive, as described in the ROM article in this issue. On a single-head drive the read/write head is on the bottom, and there is a felt pressure pad on top. The pressure pad moves down onto the disk when the lever or latch mechanism is pushed down. When the lever is up, you should be able to see the head underneath, but the pressure pad is usually on a sprung arm which can be bent back to give a clear view of the head. You should also take a look at the pressure pad — often the felt wears out, and the pad should be replaced. The hardest part of replacing the pad is finding a replacement pad.

The procedure is to lightly moisten the cleaning material with the fluid, and rub the material against the head. If the cleaner comes out dirty, use a second, or even a third one, until it comes out clean. You can use the clean one to wipe along the rails, getting off as much of the built-up oil as possible. The rails are the two rods that the heads slide back and forth on. Access to the rails is awkward, and you may have to slide the heads back and forth for better access.

Lubricating the Rails

Lubricating the rails should be an easy matter — just get the right lubricant and do it. But when I tried to find out what was the proper lubricant, I got a number of different answers. An article in *Commodore* magazine (put out by Commodore) suggested using petroleum jelly. Two months later a letter to the editor was printed from a reader who had used the method suggested, and his drive ended up in the shop, with the technician telling him that petroleum jelly was a definite no-no — a thin mineral oil was best. Phoning some of the shops around town brought a variety of answers: WD-40; not WD-40 (it's too thick), but extra fine machine oil; TV tuner lubricant. Some even said they'd never done it.

A computer repair book seemed to have the best answer: a Teflon-based lubricant such as "Break Free" (Radio Shack #64-2319 or Jensen "TriFlow". Radio Shack's "Precision Oiler" (#64-2301) is also good, as is WD-40, though it tends to break down after a few months in high use situations — Teflon-based lubricants and fine machine oil last longer.

Apply a few drops to a swab and rub the swab along the rails. Don't put too much on, and don't let it drip on anything else.

Cleaning the Write-Protect Sensor

The Commodore 1571 has a write-protect detector light. Some other drives use different mechanisms, including mechanical arms to test whether the disk notch is covered. On the 1571, the light is on a small board just under the front panel at the left side of the drive (if you can't locate it, put a disk in the drive and see where the notch will end up). Remove the front lever and the front panel comes right off. Remove the screw holding the board in place, noting the protrusion which sticks through a hole in the board, keeping it in the proper location. Lifting out the board gives you access to the light and to the detector below it. Dust off both, and put back in place.

You should be able to hook up the drive and give it a test after replacing the front panel and the lever but before you put the drive cover back on. That may save you a bit of agony if you forgot something.

I've had my drive a year and a half, with fairly heavy use for putting out the newsletter. When I did the above procedure, I found: no dirt that I could see on either of the heads, and nothing came off on the cleaning tool; the rails looked quite dry, with a sludge buildup which moved as the heads moved — it was difficult to get all the gunk off, and the rails still look dry after lubrication; absolutely no dirt or dust on the write-protect detector. So unless you have problems with your disks, probably cleaning once a year is more often than necessary.

Installing a ROM Upgrade (1571 Drive)

Most computers and software products are imperfect when they first come out, and it is only after large-scale testing by the consumer that some of the problems (bugs) are discovered.

The source of most of these problems is in ROM (Read Only Memory) chips which have the programmes written on them, so that when you turn the power on, the programme can be read in automatically.

ROM BUGS

You have a bunch of bugs inside your 1571 disk drive, and they're on the ROM IC (integrated circuit or chip) part # 310654-03. This is version 3, and Commodore has corrected [most of] the problems with an upgrade version 5 of the chip (310654-05). This chip can be installed by most of the local service shops, or you can purchase the chip and install it yourself. NESA on Belfast Rd. (off St. Laurent) was the only place I contacted which would sell the chip, *or* install it, my choice.

Some of the bugs in the V.3 chip are:

• Save with replace bug. Surely everyone knows about this plague to the 1541-1571.

• Extremely slow writing on side 2 of disk (5 times longer than side 1)

• Writing on the second side can corrupt the Block Availability Map (BAM) and/or files on either side of the disk.

• People have told me that the upgrade will load some C64 programmes which had previously balked.

"Replacing the chip may mean that some software...will not work"

Before you rush out and get the chip, one cautionary note: almost all the software you have has been written for the old version. Some software designers have ignored the problems, some have found ways to work around them. Replacing the chip may mean that some software which worked with version 3 will not work with v.5. The people who redesigned the ROM obviously tried to develop code which would avoid this incompatibility problem — how successful they were is yet to be seen. If you do choose to upgrade, keep the old chip.

I had a problem of this sort with the March issue. I had used X-Link to write files in an MS-DOS format, and had been able

to read those files directly onto the typesetting system where I work without problem. So before the March issue, I replaced the ROM, then took my disk in to work to run off the month's articles — but all of the sudden the disk reader could not read my files, but just gave some obscure error message. (Consequently, the March issue was not typeset). The problem turned out to be two characters at the beginning of the file — probably part of a better filenaming system used by DOS. Solving the problem is quite easy in this case, once the source of the problem is identified. It may not be so easy in other cases.

I've only found one programme which is adversely affected by the new chip — and that's *FAST HACK'EM* version 4.0, which won't run at all.

Replacement Procedure

So, as I said, keep the old chip. That means removing it carefully so that it doesn't get damaged, and can be reused. Let's get on with the installation.
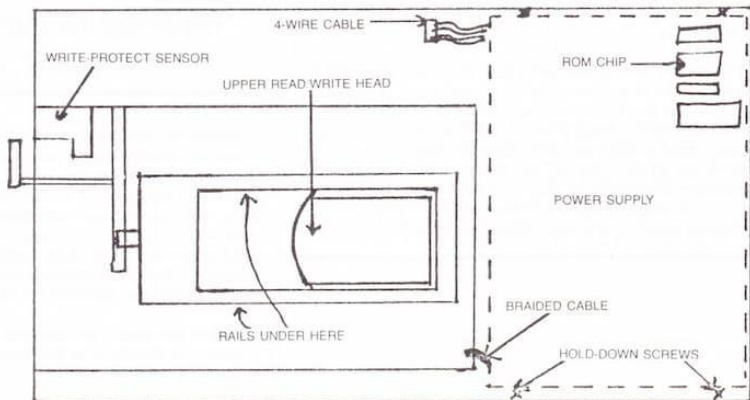
- Unplug the cables from the back of the drive. Move the disk drive to a clear, well-lit work area.

- Turn the drive over and remove the four screws from the bottom. This loosens the top, so that when you turn the drive back over, you'll have to hold the top in place, as well as collecting the 4 screws that fall out.

- Lift off the cover.

- Locate the disk drive power supply: it's the silver box in the back half of the drive. Remove the 4 screws which hold it in place.

- Disconnect either the braided ground cable on the right front of the power supply or the 4-wire socket on the left front. The socket is easier as it just lifts out, but remember how you took it off, so you can put it back the same way. There's a number

1 on the socket (if you can see it) and a number 1 on the printed circuit (PC) board — or just remember that the red wire is on the right.

- Once at least one of these cables is disconnected, you should be able to lift out the power supply and place it beside the drive.

- Now that the power supply is out of the way, identify the culprit — second chip from the left in the back row. Check the number. Placement of the chip is determined by the notch in one end of the chip. The PC board has a diagram showing where the notch should be.

- Carefully remove the old chip — this is not easy "cause that sucker's wedged in there good." Try lifting one end slightly, then the other, firmly but smoothly; the goal is to lift it out evenly. I removed mine by hand but you might try using a small screwdriver to pry up between the IC and the IC socket. Remember, you want it to come straight up, or some of the legs may get bent or — perish the thought, break off in the socket.

- Once the old IC is out, check the new one to make sure all the legs are straight. Gently straighten any bent ones, and place it on the socket, with the notch at the correct end. After making sure all the legs are lined up correctly, and in the sockets, push the IC completely into the socket. That's it.

- Put the power supply back — don't forget to reconnect the cable. Before you put the cover on, you might as well clean the read-write heads, lubricate the rails and clean the write-protect detector light — see the previous article.

Other than as noted in this article, I've had no problems with the new chip and *have* noticed an improvement in speed. *INFO* magazine put the new chip through exhaustive tests; see the Nov-Dec 1987 issue if you'd like more details on its performance.

Overhead view of a 1571 disk drive showing the location of power supply, ROM chip, and cleaning and lubricating points.

4-WIRE CABLE
WRITE-PROTECT SENSOR
UPPER READ WRITE HEAD
ROM CHIP
POWER SUPPLY
BRAIDED CABLE
RAILS UNDER HERE
HOLD-DOWN SCREWS

GAMES TIPS

compiled by Ray Monette

SERPENT'S STAR: When you come across the wandering monk give him tsampa, and ask about the scroll.
(Myong Pack — Oregon) *APPLE, COMMODORE, ATARI*

SPELLBREAKER: GO to the highest point on the cliff. When you get the message that you are about to die, GIRGOL the rocks, then GO UP.
(John Cain — Washington) *ALL COMPUTERS*

ZORK III: To get through the oddly angled room (baseball diamond). Take the bat in the SE (home plate), run the bases (SE, NE, NW, SW) and then go NORTH.
(Justin Wainwright — Michigan) *COMMODORE*

KING'S QUEST II: To get pass the ghosts at the castle, take the cross you got from the monastery and wear it.
(Robby Harryman — Missouri) *COMMODORE*

PLANETFALL: To kill a microbe, with the dial set at anything except 1, shoot the microbe with the laser until the laser is warm. When the microbe has become interested in the heat, throw the laser off the strip.
(Kaleb Yohay — New York) *COMMODORE*

PSI-5 TRADING CO: Try to choose crew members who are self-motivated (especially important in gunners and scanners). Also try to get members who won't crack under fire (because you're going to be under a lot of fire).
(David Langendoen — New York) *C64*

ZORK I: To get rid of the bat so you can get the jade figurine drop or hold the garlic in the bat room.
(Justin Wainwright — Michigan) *COMMODORE*

BARD'S TALE: The Review Board,is on the east side of the northern section of Trumpet Street (just above the Inn).
(Victor Limary — New Mexico) *COMMODORE*

SOFTWARE REVIEW:

The Write Stuff

by Ray Monette

Part 1

THE WRITE STUFF: is a collective title that covers a disk full of word processing software and the accompanying information files.

The Main programs on the disk are BB Writer, BB Talker, BB File Reader, BB Customizer, BB Manual Maker and BB Menu Maker.

This month we will look at the last 4.

BB File Reader — read files created by BB Writer without having to load the word processor. It is designed to allow you to write letters on disk and send them to your friends who can use BB File Reader to read them even if they don't own a copy of BB Writer.

BB Customizer — will customize your copy of BB Writer or BB Talker to suit yourself. This includes everything from printer codes to screen colors.

BB Manual Maker — creates a manual for BB Writer. It will print out all the help and information files in order or will print only the odd numbered pages first, which allows you to turn the paper over and print the even-numbered pages on the back.

BB Menu Maker — does what it says. It will read a disk directory, allow you to choose what names you want on the menu and to write notes, then will create a menu program that will load and run the programs on the disk.

Next month we will look at BB Writer and BB Talker. Hope you enjoyed this short review of *THE WRITE STUFF*.

I THINK, THEREFORE I COMPUTE.

C64 Game Design

Thirty-ninth of a series

by John Batchelor

Let me point you to a lovely program in the May 1988 *Trans-actor* (volume 8, #6). *Cellular Automata* is based on some ideas introduced in *Scientific American*, *Nature* and *Byte* magazines. In this implementation, the colour of each pixel on the 160 by 200 multi-colour hi-res screen is determined by the combination of colours of the three pixels immediately above it. I've submitted it for the club disk as HIRES.AUTOCELL.C and it is so fast in machine language that you can only watch in amazement at the cascading colours. After viewing the default display, hit the "a" key for automatic generation of random displays. Because the author (Ian Adam of Vancouver) used light red, light green and light blue on a black background, you sometimes get wonderful blends as alternating green and red produce yellow areas, for example.

"...you can only watch in amazement at the cascading colours."

Here is a BASIC version in lo-res which is not too painfully slow to watch. It is also submitted for the club disk as LORES.AUTOCELL.C but is short enough to type in for your own amusement. Don't bother with the REM statements.

```
10 rem lo-res cellular automata
11 rem John Batchelor
12 rem for OHCC 88.04.15
20 dim a(40),b(39),c(9),d$(3)
21 rem a is old row
22 rem b is new row
23 rem c is transforming code
24 rem d$ is the display codes
30 d$(0)=" "
40 d$(1)="[lt red][rev] [off]"
50 d$(1)="[lt grn][rev] [off]"
60 d$(1)="[lt blu][rev] [off]"
70 print "[clr][yellow]code ";
80 poke53281,0:poke53280,0
89 rem initialize code
90 i = rnd(-ti): print
100 for i=0 to 9
110 c(i) = int(rnd(0)*4)
```

```
120 print c(i);
130 next:print
139 rem random line 1
140 a(40)=0:for i=0 to 39
150 a(i) = int(rnd(0)*4)
160 print d$(a(i));:next
169 rem main loop
170 a = 0:for i=0 to 39
180 b = a(i):c = a(i+1)
190 sm=a+b+c
200 a = b:b = c
210 b(i) = c(sm)
220 print d$(b(i));:next
230 for i=0 to 39
240 a(i) = b(i):next
250 get a$:if a$ = "" then 170
260 goto 70
```

Some of the displays from this program will peter out and become boring. Just hit any key for a new randomized transformation code and a new first line. This program gives you only one-quarter of the width and one-eighth of the depth of the hi-res version.

Talking, Reading Instructor

Another idea I may get time to work on is a talking reading instructor. My sons are old enough for this to be fun. I have the Voice Messenger cartridge which adds instructions to BASIC such as SAY "CAT" and the computer does its best on that string. You can also use the speech emulation module from S.A.M. (Software Automatic Mouth) which has been in semilegal circulation for a long time. The pronunciation of these products is pretty good on three letter words and that is all I had in mind.

"Sound effects and a 'reward' screen are typical enhancements."

Let's have the computer present a list of three words. Use lower case letters if you want teachers to approve. It is not necessary to create a special giant letter set. Your kids' eyes are better than yours at seeing small print. They'll get up close and put their fingers on the screen anyway. The computer will ask (out loud) the child to find one of the words. The child will use the

joystick to position a pointer on one word in the list and be told if that is the right or wrong choice.

To make it very easy, all the words could be read out first. A list of all three-letter words can be obtained from a Scrabble dictionary but you probably will want to use just the everyday ones. You can add scoring or give several tries. Sound effects and a "reward" screen are typical enhancements.

The word lists will be in DATA statements for easy modification. One of my boys tends to look at just the first letter of a word and then guess. Therefore, I will use word lists such as "bat, bit, but" and "pat, pan, pal" to encourage reading the whole word. Watch your child using the program or reading other material and make up your own lists which address any specific problems.

EDITORIAL

by Bob Mason

Technology is amazing, isn't it. Peter sat me down in front of this AT and said "Fill that space." So I'll babble on until the type is lined up with the next column, and then stop, leaving space for the cartoon across the bottom.

Actually I did want to point out a couple of things which you may not notice in this issue unless you look really closely. One is the note "HELP" by Bob Handforth at the bottom of page 15. He's looking for people who use *The Enhanced SID Player*. Read the note. And the second is in the Classified column—the club is looking for a C128 librarian. Both Ed and Peter are involved in other things, but would be happy to help the new librarian learn the ropes. If you have a 128, think about it.

Is there an answer?

There are programs for testing for the virus. VCheck1.9 tests for any non-standard pattern on disk. Any odd pattern might be a virus, or it could be a protection scheme. You can get VCheck1.9 from TPUG or any other public distribution library.

You can detect the existence of the SCA virus and close relatives by holding down the left mouse button each time you reboot the Amiga (using the three key combination). If the screen flashes green briefly, you've got the virus in memory. Remember, this is a deliberately coded SCA feature; new viruses probably won't have it.

You can guard against the virus by setting "write protect" on all your boot disks. If you need to write on such disks, you can take off the write protect status after the boot has taken place.

You can remove the virus by giving the CLI command IN-STALL. Do not do this with commercial disks, which might contain a protection scheme that would be destroyed by the INSTALL command. And don't do this with data disks ("non-boot" disks)...the Amiga would be confused by a disk which had an INSTALL track but did not have the supporting libraries, such as C, L, S, DEVS, and LIBS.

Good News!

Good news! There's a reward system being set up to track down and prosecute anyone creating a virus. Fred Fish (of "Fish disk" fame) reported that in early January, over $1,000 had been pledged to this fund, and more is coming in.

Computer virus infections should be stamped out like any other disease.

In keeping with this month's theme spotlighting printers, the camera-ready artwork for this entire issue was prepared by Peter Nickless using Ventura Desktop Publisher and printed on a Hewlett-Packard LaserJet II printer (with the exception of the disk drive diagram, the three cartoons by Vojta Frysek, and the ad pages).

This page shows two sample pictures which demonstrate the exceptional resolution achievable with the LaserJet printer.
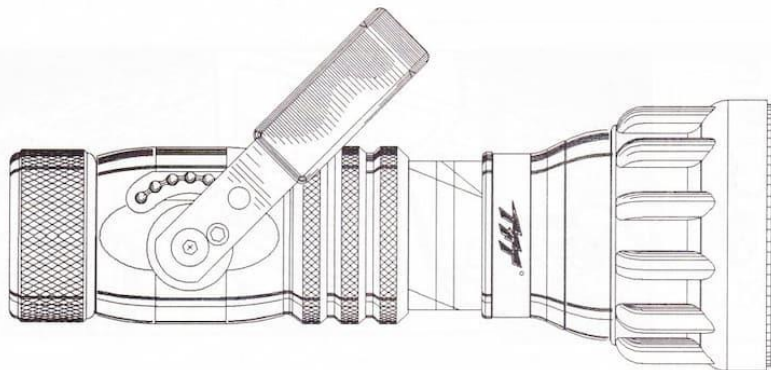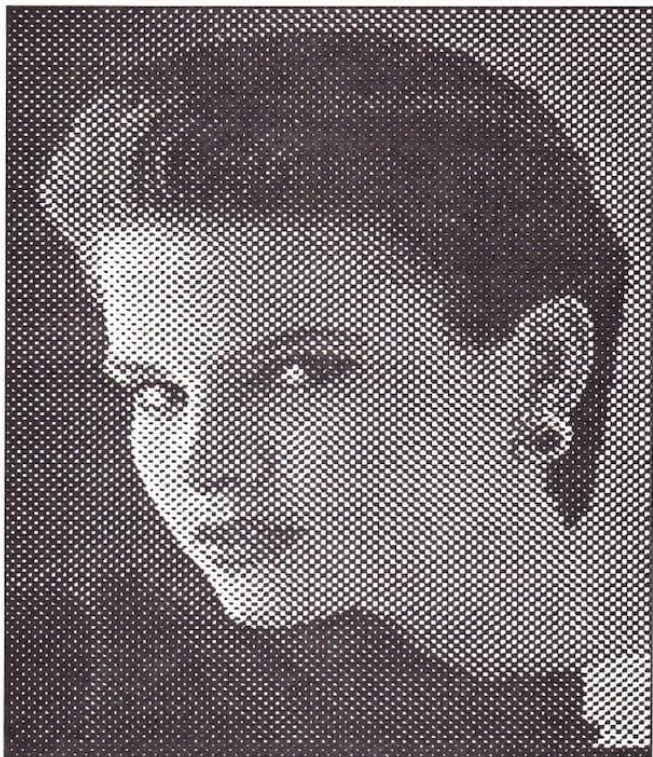
MS-DOS Software Library

The following software is now available from the MS-DOS Librarian, Peter Nickless. See him at the Club meeting or order your disks in advance by calling — 837-3402.

Baker's Dozen

A collection of utilities from Jim Button. A one-page spreadsheet, programmable date calendar, disk utility, find files containing a given string, print sideways, sort files, redirect printer output to a file, set screen colours and more!

Computer Tutorial

Shows you the way around DOS and the computer. A complete guide for the novice.

DanCad 3D v2.0 (2 disks)

A major upgrade to this 3D drawing and animation program. Supports a mouse and trackball. Supports CGA, EGA and Hercules graphics cards. Can output to dot matrix printers, laser printers, plotters and even the Linotronic 300 typesetter. A disk drive of 720K minimum is required. A hard disk is highly recommended, as is a fast computer (80286 or 80386). A registration fee of US$35.00 will get you a 14 disk set along with a 270 page manual. You will also receive a version that supports a math co-processor, a newsletter and more.

Disk Commando v2.10

Utilities patterned after the Norton Utilities Advanced Edition.

DOS Extensions (2 disks)

A collection of 27 programs to make life at the DOS prompt more productive. Change file attributes, time programs, find patterns in text files, move files across subdirectories, count words/lines etc., retrieve deleted files, find files on disk and much more.

Educational Disk # 1

A collection of many elementary level educational programs.

Educational Disk # 2

A set of three programs. A flashcard style math drill, French vocabulary lessons, and a program to make you a better player at blackjack.

Educational Disk # 3

A disk for the 4–8 year old. Help with the alphabet, numbers, shapes, colours, counting, matching, pattern recognition and problem solving.

Express Graph v1.02

A graphing program with 10 types of graphs. Input data manually or from File Express.

EZ-Forms "Executive"

An excellent forms generator. Lots of features-on-line help, laser printer support, math functions, block operations, auto date/time, auto numbering, and more...

Finance Manager II v1.0

A general ledger program for the individual or small business.

Freefile v1.0

A menu driven database program with up to 100 fields per record, 1000 characters per field, and 10 indices and 2 billion records per database.

Galaxy v2.3

A fast and powerful word processor. It's easy to use and now supports macros. A new external parameter file allows you to save "custom" setups for different types of work.

Games Disk # 1

A collection of some terrific games: Breakout, Bugs, Castle, Lander, Life, Packman, Space Invaders, Wizard, and Xwing.

Games Disk # 2

A collection of space games. Dueling Star Ships- a game for two; Gemini — a game for two to play over a modem; and Trek — a good version of Star Trek for one player.

Home Money Manager v1.04 (2 disks)

A simple home chequebook, budgeting and crdit tracking tool. Can handle 60 expense categories.

Lawlib v4.0

A database program. Well suited for most simple database tasks. Easy to use. Written locally.

Lotus Accounting Spreadsheets

A collection of Lotus 123 spreadsheets for accounting, including a number of financial statements routinely required by Canadian banks for borrowers.

Menus

Two menuing programs — AUTOMAXX v2.1 and AUTOMENU v4.01. Can make for fast and easy use of your hard disk. Particularly useful for setting up a computer for more than one user.

Outline v3.22

Outlining program with lots of power.

PC-Calc v2.0

A Jim Button spreadsheet. Provides 26 columns by 255 rows. Full featured. You may not need Lotus 123.

PC-File III v4.0

The popular user supported database program.

PC-Hack v3.6

A Dungeons & Dragons type adventure game. Very detailed and challenging.

PC-Key-Draw v3.0

A sophisticated Computer Aided Design program. Draw complex designs with ease.

PC-Style v1.2

Analyze the readability level of your documents. Computes the percentage of long words, personal words, action verbs, words per sentence, and average syllables per word. Works with any ASCII or Wordstar file.

PC-Talk III

A "freeware" telecommunications program.

PC-Write v2.7 (2 disks)

A "freeware" word processor that can rival many commercial programs. Now has a resident spelling checker.

ProComm v2.42

Telecommunications program as good as it gets.

ProComm Plus v1.0

A fully functional version of a much enhanced ProComm. Librarians Choice.

QubeCalc v1.01

A true three–dimensional spreadsheet. The work "Qube" contains 262,144 cells.

Telix v2.12

Another excellent telecommunications program.

HELP!!!

I'd like to contact anyone who owns or is using Compute's newest music book, The *Enhanced SID Player* by Craig Chamberlain. I think it is a really good program — but arrangements produced on it can only be played by those who have the program. So I'd like to compare notes, discuss techniques and perhaps exchange efforts with others who are using this program. Call **Bob Handforth, 733-4869.**